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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
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STINSON, FRANKIE L

ART UNIT	PAPER NUMBER
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1746

DATE MAILED: 01/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/052,553	<b>Applicant(s)</b> JEONG ET AL.	
	<b>Examiner</b> FRANKIE L. STINSON	<b>Art Unit</b> 1746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 14 November 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,3,4 and 8-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13-16, 18 and 24-28 is/are allowed.
- 6) ☒ Claim(s) 1,3,4,8-12,17 and 19-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |                                                                                                                        |                                                                                         |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                            | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

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1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3, 4, 9, 11, 17, 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukumoto et al. (U. S. Pat. No. 6,282,928) in view of either EPO'700 (European Patent Office 0 485 700), Kim et al. (U. S. Pat. No. 5,983,520) or WIPO'160 (WO 93/17169).

Re claim 1, Fukumoto (see figs. 7-9) is cited disclosing a washing machine comprising.

a first tub (14);

a second tub (13) disposed in the first tub;

at least one circulation duct (24) operatively coupled with the first tub to receive air from the second tub, dehumidify the air and recirculate the dehumidified air back into the second tub to dry laundry in the second tub during a drying operation of the washing machine; and

a water supplying duct (43) for supplying external water to a part of the at least one circulation duct to flow down the duct from said part and come in contact with air received in the duct to dehumidify the air in the at least one circulation duct, that differs from the claim only in the recitation of the water supplying duct supplying water to an *upper* part of the circulation duct and dehumidifying the air primarily by water flowing along an inner wall of the duct in direct contact with the air. EPO'700, Kim (see fig. 1) and WIPO'169 (see fig. 4), are each cited disclosing that it is old and well known to

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position in a drying circuit/duct, a water supply in an upper part of their respective circulation duct. It therefore would have been obvious to one having ordinary skill in the art to modify the position of the water supplying duct in Fukumoto, to be positioned in an upper part of the circulation duct as taught by either EPO'700, Kim and WIPO'169, for the purpose of increasing the length of time the moisture laden air from the tub, contacts/mixes with the cooling/condensing water, thereby increasing the amount of moisture removed from the air traveling there through. This effectively creates a longer/larger cooling surface area of the duct. Re claim 3, Fukumoto discloses the fan (26) and heater (25). Re claim 4, Kim discloses the fan as a *sirocco* type fan. Claims 9 and 11 define over Fukumoto only in the recitation of a fan, for supplying of external air to an outer surface of the circulating duct. WIPO'169 (see page 4, lines 21-25, see fig. 1) is cited disclosing a fan (19) for supplying external air to the outside surface of the circulating duct (13) as claimed. It therefore would have been obvious to one having ordinary skill in the art to modify the device of Fukumoto, to include a fan as taught by WIPO'169 for the purpose of enhancing the water removal efficiency of the condenser. Re claim 17, no patentable distinction is deemed to exist between the fan as claimed and the fan as taught by WIPO'169. The same are the functional equivalent of each other in that they both are employed to move external air to circulation duct for dehumidification purposes. Re claim 19, Fukumoto discloses the pulsator (16, 19) Re claim 20 and 20, Fukumoto discloses the drain duct (22) and the spaced circulation duct (24).

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3. Claims 8 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over the applied prior art as applied to claim 1 above, and further in view of EPO'389 (European Patent Office 0 743 389).

Claim 8 defines over the applied prior art only in the recitation of the plural helical grooves provided at an inner wall surface of the circulation duct. EPO'389, is cited disclosing a circulation duct have a helical groove therein which retards the flow of water through the condenser. It therefore would have been obvious to one having ordinary skill in the art to modify the device of Fukumoto, to include a helical groove as taught by EPO'389, for the purpose of efficiently discharging a large volume of condensate. To employ a plurality of helical grooves is deemed to be a mere duplication or parts in that as claimed, no patentable distinction is deemed to exist in employing a single "thing" or a "plurality of things" when the plurality of things all function in the exact same manner (see MPEP 2144.04 REVERSAL, DUPLICATION OR RE-ARRANGEMENT OF PARTS).

4. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over the applied prior art as applied to claim 1 above, and further in view of Kim (U. S. Pat. No. 5,277,210).

Claim 12 defines over the applied prior art only in the recitation of fins on the circulation duct. Kim (see fig. 1 and 2) is cited disclosing that it is old and well known to provide external fins on a circulation duct in a washer/dryer. It therefore would have been obvious to one having ordinary skill in the art to modify the duct of Fukumoto, to include

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fins as taught by Kim, since it is old and well known in the art to employ fins on a dehumidifying duct for the purpose of dissipating heat for a heat exchange function.

5. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brucken et al. (U. S. Pat. No. 3,216,126) in view of either Cline (U. S. Pat. No. 2,818,719 or Krupsky (U. S. Pat. No. 3,402,576).

Re claim 10, Brucken is cited disclosing a dryer, comprising  
a tub (18):

at least one circulation duct (50, 64) operatively coupled to the first tub to receive air from the tub, dehumidify the air and recirculate the dehumidified air back into the tub to dry laundry in the tub during a drying operation of the machine;

an external air supplying duct (as at 82) for supplying external air towards the at least one circulation duct, said external air supplying duct has having an outlet disposed in the said at least one circulation duct; and

an air fan disposed to draw the external air into the external air supplying duct that differs from the claim only in the recitation of the device being combined with a washing machine which includes a first tub disposed in a second tub and an external fan near disposed at an inlet area of the external air supplying duct. The patents to Cline and Krupsky are cited disclosing that it is old and well known to provide a laundry dryer, which also comprises a washing machine, which includes a first tub and second tub with a circulation duct such that the duct receives air from the second tub to dehumidify and return the same to the second tub. It therefore would have been obvious to one having ordinary skill in the art to modify the device of Brucken, to include the

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items associated with the washing machine as taught by either Cline or Krupsky, for the purpose of providing for a washing and drying process in the same unit. As for the external air fan, in the arrangement of Brucken, external air is forced into the circulation duct by the fan already, to employ a second fan, or relocated the fan to the entrance, is deemed to be a mere extension/duplication of the teachings of Brucken (see MPEP 2144.04 REVERSAL, DUPLICATION OR RE-ARRANGEMENT OF PARTS).

6. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over the applied prior art as applied to claim 10 above, and further in view of Japan'857.

Claim 23 defines over the applied prior art only in the recitation of the plurality of grooves in the duct as claimed. Japan'857 is therefore cited as applied to the subject matter of claims 8 and 22 in paragraph 3 above.

7. Claims 13-16, 18 and 24-28 stand allowed.

8. Applicant's remarks with respect to claims 1, 3-4, 8-28 have been considered but are moot in view of the new ground(s) of rejection.

However, in regard to the remark on the examiner's use of alternative references, it should be noted that in instances, at least a single alternative references, whereas others are not, are also applicable to subject matter claimed latter in dependent claims and would have been used any way. This avoids the writing of a separate paragraph for the alternative reference, in order to reduced the time spent in the actual construction of the Office Action. With hundreds applications in wait, the Office desires the examiner to expedite applications for patents in a swift manner and the examiner is obliged to do so. Regarding the rejection Japan'857 reference, namely that the same is directed to an

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engine exhaust system, please note that the same is also directed to a condenser for dehumidifying a gas, like that in the instant invention, and therefore the reference is considered to be reasonable pertinent. Nonetheless, note the inclusion of EPO'389 where there is provided a helical configuration and as stated above, to employ a plurality of helical grooves is deemed to be a mere duplication or parts in that as *claimed*, no patentable distinction is deemed to exist in employing a single "groove" or a "plurality of grooves" when the plurality of things all function in the exact same manner. In regard to the WIPO'169 reference, note in fig. 1, for example, the condenser duct 13 and an external duct (17) surrounding the condenser having a fan (19) at the entrance thereof. In regard to the Kim'210 reference as applied to the subject matter of claim 12, please note that even though Kim is directed to a dishwasher, the same is also directed to a condensing duct, and is therefore reasonable pertinent. Applicant has not claimed a method, but an rather an apparatus. In regards to the Brucken reference, please note that the same has no washing function but is only a dryer and is therefore not clearly a "combined washer and dryer". If the same is to be, modified to wash and dry laundry, a tub to contain the wash water is necessary.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. In WIPO'370 and Japan'981, note the condenser means.

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).



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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to FRANKIE L. STINSON whose telephone number is (571) 272-1308. The examiner can normally be reached on M-F from 5:30 am to 2:00 pm and some Saturdays from approximately 5:30 am to 11:30 am.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr, can be reached on (571) 272-1700. The fax phone number for the organization where this application or proceeding is assigned is 571-272-8300.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

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For more information about the PAIR system, see <http://pair-direct.uspto.gov>.

Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

fls

  
FRANKIE L. STINSON  
Primary Examiner  
GROUP ART UNIT 1746